

Amendments to the Claims:

1. (currently amended) A system for processing electrodepositing a conductive material on a surface of a wafer using a solution, the system comprising:

an electrode anode;

a mask having a first surface upper and a second surface lower surfaces, the mask comprising a plurality of openings extending between the first upper and second lower surfaces and being supported between the anodeelectrode and the surface of the wafer, wherein the mask and the surface of the wafer is configured to establish relative motion therebetween during the processing; and

a conductive mesh positioned below the upper between the first surface of the mask and the electrode and in proximity of the first surface such that the plurality of openings of the mask defines a plurality of active regions of the conductive mesh wherein the conductive mesh is connected to a first power input;~~;~~ and

~~a liquid electrolyte flowing through the openings of the mask and through the active regions of the conductive mesh so as to contact the surface of the wafer.~~

2. (currently amended) The system of Claim 1, wherein the conductive mesh is attached to the firstlower surface of the mask.

3. (currently amended) A system for processing electrodepositing a conductive material on a surface of a wafer, the system comprising:

an electrode anode;

a mask having a first surface upper and a second lower surfaces, the mask comprising a plurality of openings extending between the firstupper and secondlower surfaces and being supported between the anodeelectrode and the surface of the wafer;

a conductive mesh positioned between the first surface and the second surface of the mask below the upper surface of the mask such that the plurality of openings of the mask defines a plurality of active regions of the conductive mesh wherein the conductive mesh is configured to connected to a first power input; and

a ~~liquid electrolyte~~ solution configured to wetting the electrode and flowing through the openings of the mask and through the active regions of the conductive mesh so as to contact the surface of the wafer;

~~wherein the conductive mesh is in the mask and is positioned between the upper surface and the lower surface of the mask.~~

4. (original) The system of Claim 1, wherein the conductive mesh comprises a first area and a second area.

5. (original) The system of Claim 4, wherein the first area is connected to the first power input.

6. (original) The system of Claim 5, wherein the second area is connected to a second power input.

7. (currently amended) An anode assembly useable together with a cathode assembly in a device which is adapted to provide deposition of conductive material from a solution ~~a liquid electrolyte~~ onto a surface of a semiconductor substrate comprising:

an ~~electrode~~ anode which is adapted to be contacted by the solution ~~liquid electrolyte~~ during deposition of said conductive material,

a conductive element configured to connect to a power source and permitting solution ~~liquid electrolyte~~ flow therethrough, and

a mask having a first surface and a second surface and lying over the conductive element ~~and having openings permitting~~ solution ~~liquid electrolyte~~ flow therethrough, the first surface of the mask facing the anode and the conductive element being positioned between the first surface and the anode, said openings of the mask defining active regions of the conductive element by which a rate of conductive material deposition onto said surface is adapted to be varied.

8. (original) The anode assembly of Claim 7, wherein said conductive element is a conductive mesh.

9. (original) The anode assembly of Claim 7, wherein said conductive element includes a plurality of electrically isolated sections.

10. (canceled)

11. (canceled)

12. (previously amended) The anode assembly of Claim 9, wherein the electrically isolated sections are adapted to be connected to separate control power sources.

13. (currently amended) An anode assembly useable together with a cathode assembly in a device which is adapted to provide deposition of conductive material from a solution electrolyte onto a surface of a semiconductor substrate comprising:

an ~~electrode~~anode which is adapted to be contacted by the solution electrolyte during deposition of said conductive material,

a conductive element adapted to be connected to a power source and permitting solution electrolyte flow therethrough, and

a mask lying over the conductive element and having openings permitting ~~electrolyte~~solution flow therethrough, said openings defining active regions of the conductive element by which a rate of conductive material deposition onto said surface is adapted to be varied,

wherein the conductive element is sandwiched between top and bottom mask portions which together define said mask.

14. (currently amended) The anode assembly of Claim 7, wherein the conductive element is placed under a lower surface of said mask wherein said lower surface facing the electrode.

15. (original) The anode assembly of Claim 9, wherein one of said electrically isolated sections circumferentially surrounds another of said electrically isolated sections.

16. (original) The anode assembly of Claim 15, wherein the electrically isolated sections are irregularly shaped.

17. (original) The anode assembly of Claim 15, wherein said one of said electrically isolated sections is ring shaped.

18. (original) The anode assembly of Claim 17, wherein the other of said electrically isolated sections is disc shaped.

19. (original) The anode assembly of Claim 9, wherein said electrically isolated sections define adjacent strips.

20. (currently amended) An apparatus which is adapted to control thickness uniformity during deposition of conductive material from a liquidn-electrolyte onto a surface of a semiconductor substrate comprising:

an anode which is adapted to be contacted by the liquidelectrolyte during deposition of said conductive material,

a cathode assembly including a carrier adapted to carry the substrate for movement during said deposition,

a conductive element permitting liquidelectrolyte flow therethrough,

a mask having a first surface and a second surface~~lying over the conductive element and~~ having openings adapted to permitting liquidelectrolyte flow therethrough, the conductive element being placed between the second surface and the anode, said openings defining active regions of the conductive element by which a rate of conductive material deposition onto said surface is made variable, and

a power source which is adapted to provide a potential between said anode and said cathode assembly so as to produce said deposition.

21. (original) The apparatus of Claim 20, wherein said conductive element is a conductive mesh.

22. (original) The apparatus of Claim 20, wherein said conductive element includes a plurality of electrically isolated sections.

23. (original) The apparatus of Claim 22, wherein said conductive element includes at least one isolation member separating the electrically isolated sections.

24. (original) The apparatus of Claim 22, wherein said conductive element includes at least one gap separating the electrically isolated sections.

25. (currently amended) The apparatus of Claim 22, wherein the electrically isolated sections are adapted to be connected to separate control power sources.

26. (currently amended) An apparatus which is adapted to control thickness uniformity during deposition of conductive material from an electrolyte onto a surface of a semiconductor substrate comprising:

an anode which is adapted to be contacted by the electrolyte during deposition of said conductive material,

~~a cathode assembly including a carrier adapted to carry the substrate for movement during said deposition,~~

a conductive element adapted to permitting electrolyte flow therethrough,

a mask having a first surface and a second surface and lying over the conductive element and having openings permitting electrolyte flow therethrough, the conductive element being positioned between the second surface and the anode and said openings defining active regions of the conductive element by which a rate of conductive material deposition onto said surface is made variable, and

a power source which is adapted to provide a potential between said anode and said ~~cathode assembly~~ surface of the semiconductor substrate so as to produce said deposition,

wherein the conductive element is sandwiched between top and bottom mask portions which together define said mask.

27. (original) The apparatus of Claim 20, wherein the conductive element is placed under a lower surface of said mask.

28. (original) The apparatus of Claim 22, wherein one of said electrically isolated sections circumferentially surrounds another of said electrically isolated sections.

29. (original) The apparatus of Claim 28, wherein the electrically isolated sections are irregularly shaped.

30. (original) The apparatus of Claim 28, wherein said one of said electrically isolated sections is ring shaped.

31. (original) The apparatus of Claim 30, wherein the other of said electrically isolated sections is disc shaped.

32. (original) The apparatus of Claim 22, wherein said electrically isolated sections define adjacent strips.

33. (currently amended) The apparatus of Claim 22, and further comprising at least one control power source which is ~~adapated~~ adapted to supply a voltage to at least one of said electrically isolated sections to vary said rate of conductive material deposition onto a region of said surface.

34. (original) The apparatus of Claim 33, wherein said rate is increased.

35. (original) The apparatus of Claim 33, wherein said rate is decreased.

36. (previously amended) The apparatus of Claim 22, wherein said power source is adapted to additionally supply a voltage to at least one of said electrically isolated sections to vary said rate of conductive material deposition onto a region of said surface.

37. (original) The apparatus of Claim 36, wherein said rate is increased.
38. (original) The apparatus of Claim 36, wherein said rate is decreased.
39. (previously amended) The apparatus of Claim 36, and further comprising at least one additional power source which is adapted to supply an additional voltage to another of said electrically isolated sections.
40. (previously amended) The apparatus of Claim 20, and further comprising at least one control power source which is adapted to supply a voltage to said conductive element to vary said rate of conductive material deposition.
41. (original) The apparatus of Claim 39, wherein said rate is increased.
42. (original) The apparatus of Claim 39, wherein said rate is decreased.
43. (previously amended) The apparatus of Claim 20, wherein said power source is adapted to supply a voltage to said conductive element to vary said rate of conductive material deposition.
44. (original) The apparatus of Claim 43, wherein said rate is increased.
45. (original) The apparatus of Claim 43, wherein said rate is decreased.
- 46-56. (Cancelled)
57. (currently amended) An apparatus which is adapted to control thickness uniformity during electroetching of conductive material from a surface of a semiconductor substrate comprising:
an electrode~~anode~~ which is adapted to be contacted by a solution~~electrolyte~~ during electroetching of said conductive material,

~~a cathode assembly including a carrier adapted to carry the substrate for movement during said electroetching,~~

a conductive element permitting electrolyte flow therethrough,

a mask having a first surface and a second surface ~~lying over the conductive element~~ and having openings permitting electrolyte flow therethrough, the conductive element being positioned between the second surface and the electrode and said openings of the mask defining active regions of the conductive element by which a rate of conductive material electroetching from said surface is made variable, and

a power source which is adapted to provide a potential between said electrode~~anode~~ and said surface of the semiconductor substrate~~cathode assembly~~ so as to produce said electroetching.

58. (original) The apparatus of Claim 57, wherein said conductive element is a conductive mesh.

59. (original) The apparatus of Claim 57, wherein said conductive element includes a plurality of electrically isolated sections.

60. (original) The apparatus of Claim 59, wherein said conductive element includes at least one isolation member separating the electrically isolated sections.

61. (original) The apparatus of Claim 59, wherein said conductive element includes at least one gap separating the electrically isolated sections.

62. (canceled)

63. (previously added) The system of Claim 1, wherein the conductive mesh is attached to the mask.

64. (previously added) The anode assembly of Claim 7, wherein the conductive element is attached to the mask.

65. (previously added) The apparatus of Claim 20, wherein the conductive element is attached to the mask.

66. (previously added) The apparatus of Claim 57, wherein the conductive element is attached to the mask.

67. (new) The system of claim 1, wherein the another electrode is in the mask and is positioned between the upper surface and the lower surface of the mask.

68. (new) The system of claim 1, wherein the conductive mesh comprises a first area and a second area.

69. (new) The system of claim 1, wherein the conductive mesh comprises areas.

70. (new) The system of claim 69, wherein each area is connected to a different power source.

71. (new) The system of claim 68, wherein the first area is adapted to connect to a first power.

72. (new) The system of claim 71, wherein the second area is adapted to connect to a second power.

73. (new) The system of claim 1, wherein the processing is electrodepositing.

74. (new) The system of claim 1, wherein the processing is electropolishing.
